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Corrigendum

Corrigendum to "Physiological and molecular mechanisms associated with cross tolerance between hypoxia and low temperature in *Thaumatotibia leucotreta*" [J. Insect Physiol. 82 (2015) 75–84]

Leigh Boardman [a,*], Jesper G. Sørensen [b], John S. Terblanche [a]

[a] Department of Conservation Ecology and Entomology, Centre for Invasion Biology, Stellenbosch University, Private Bag X1, Matieland 7602, South Africa
[b] Section for Genetics, Ecology & Evolution, Department of Bioscience, Aarhus University, Ny Munkegade 116, DK-8000 Aarhus C, Denmark

The authors regret that there was an error in the illustration of the results of the total protein assay, resulting in incorrect representations of this variable in Figs. 2h, 3, Table 2 and Supplementary data in the published version of the paper. These errors have now been corrected and the corrections to the relevant discussion points are noted below. The overall conclusions and outcomes of the study are however unchanged despite this error.

Table 2: Mechanical stress, acute hypoxia, chronic dry hypoxia and chronic moist hypoxia pre-treatments increased total protein relative to the handling control at the timepoints indicated.

3.3. Cross tolerance hypothesis: The start of the second paragraph should read: "More specifically, the non-thermal, non-gas mechanical stress pre-treatment was associated with an increase in total protein concentration, HSP70 and sorbitol (Table 1; Fig. S1h, i, m)."

3.6. Principal components analysis: Factor 1 explains 41.83% of the variance, and factor 2 explains 23.32% (see Fig. 3). According to the revised PCA, total protein did not change in response to low temperatures.

The authors would like to apologize for any inconvenience caused.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.jinsphys.2016.05.004.

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* Corresponding author.
E-mail address: boardman.leigh@gmail.com (L. Boardman).

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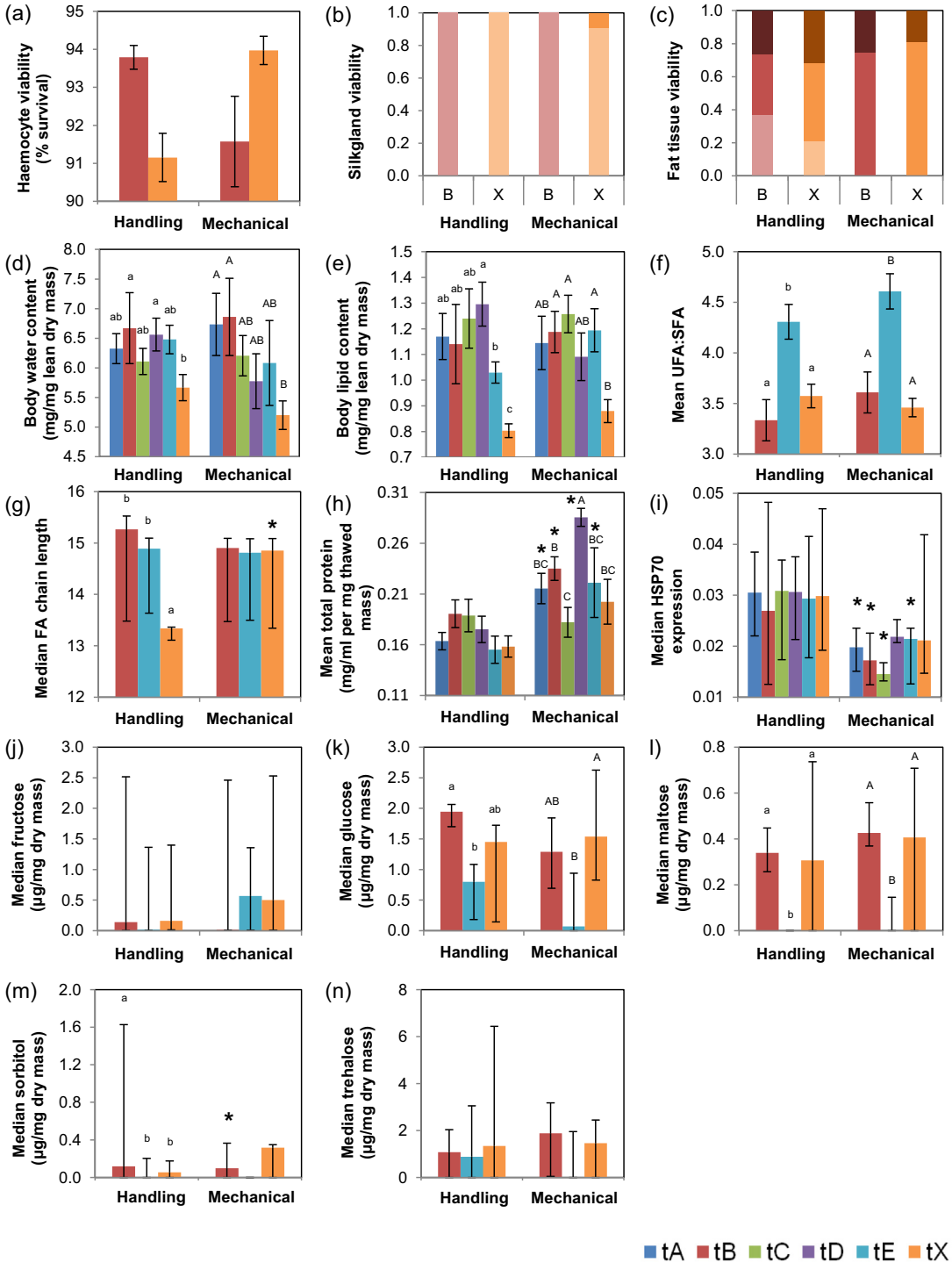

Fig. 2. Physiological and biochemical responses to the handling control and mechanical stress pre-treatments: (a) mean haemocyte viability, (b) silk gland viability, (c) fat tissue viability, (d) mean body water content, (e) mean body lipid content, (f) mean UFA:SFA, (g) median fatty acid (FA) chain length, (h) mean total protein concentration, (i) median HSP70 expression, (j–n) median cryoprotectant concentrations of (j) fructose, (k) glucose, (l) maltose, (m) sorbitol and (n) trehalose. Different colours represent the different timepoints (refer to the legend in the bottom right corner, Fig. 1). For tissue viability (b) and (c), data for each timepoint (t_B and t_X shown as B and X on x-axis) are presented as proportions with the lightest colour indicating tissues with <10% damage (score = 1 on nominal scale) and the darkest colour indicating tissues with >80% damage (score = 3). *denotes a mechanical stress timepoint that was significantly different from the same timepoint in the handling control experiment. Significant differences between timepoints within each experiment are indicated by different letters (small letters for handling control and capital letters for mechanical stress). (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

Table 2
Significant differences as increase (+) or decrease (−) relative to the handing control for each of the different pre-treatments – based on least square means from generalized linear models output (Table S5). Timepoints sampled were post pre-treatment (t_A), 2 h post pre-treatment (t_B), during the standard low temperature exposure (t_C), post standard low temperature exposure (t_D), 2 h post standard low temperature exposure (t_E) and 26 h post standard low temperature exposure (t_X).

Variable[a]	Timepoint	Mechanical stress	Low temperature	High temperature	Acute hypoxia	Chronic dry hypoxia	Chronic moist hypoxia
Survival	t_X		+		+		+
Haemocyte viability	t_B						
	t_X						−
Body water content	t_A		+		−		
	t_B		+	−		−	−
	t_C		+		−	−	
	t_D		+		−	−	
	t_E		+		−		−
	t_X		+		−		
Body lipid content	t_A						
	t_B						
	t_C		+				
	t_D						
	t_E			+			
	t_X				+		+
UFA:SFA	t_B		+			+	
	t_E						
	t_X						
Fatty acid chain length	t_B		−				
	t_E						
	t_X	+	+	+	+	+	+
Total protein content	t_A	+			+		+
	t_B	+					+
	t_C				+		
	t_D	+			+	+	+
	t_E	+			+		
	t_X				+	+	+
HSP70	t_A	−			−		
	t_B	−	+				
	t_C	−					
	t_D				−		
	t_E	−	+		−	−	
	t_X		+	−	−		
Sorbitol	t_B	−	−	−	−		−
	t_E						
	t_X						

[a] Results for pupation, emergence, silk gland viability, fat tissue viability, fructose, glucose, maltose or trehalose were not significantly different to the handling control at any timepoint.

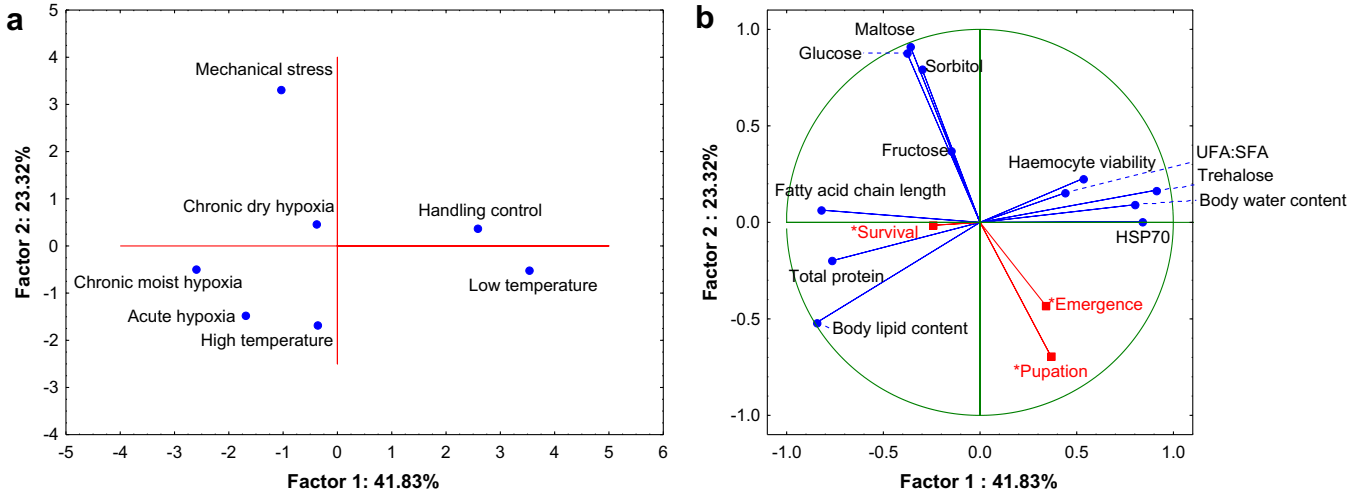

Fig. 3. Principal components analysis of mean or median data for all variables measured (except tissue viability) 26 h post standard low temperature exposure (t_X) showing the projection for the (a) variables and (b) experiments for the first 2 factors (explaining 65.15% of the variance). Survival, pupation and emergence are plotted in red as supplementary variables, although they had no bearing on the loadings. UFA:SFA – ratio of saturated to unsaturated fatty acids; HSP70 – heat shock protein 70. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)